and carefully built in cement, it will make a bond unequalled by any other; but the hoop should be stretched before using, and well turned up over the courses above, at the angles of the buildings, and to the jambs, to form a good tie; and it should be painted to prevent rusting: it should be well blocked at the end with the brick against it, to take the strain, and hooked together at the joints. One reason for having thick hoop is, that two or three pieces are more likely to be put in well than so many thin pieces. The way hoop is frequently put in is of little use, as I have seen, when left to the ordinary care of bricklayers, as it interrupts their work, and they (some of them) do not like it, so that it should be put in by a responsible man. I mention these points, as I have seen them unheeded, so long as the hoops are hanging out to view; but a good foundation is the most important, and, where the ground is bad, to spread out the brickwork to a good width, especially where the heaviest parts of the building are—as under columns and piers, where the pressure is sometimes over a small surface and likely to compress. Where it is desirable to make a building as fireproof as possible, the lintels may be dispensed with, by putting three or four courses of hard bricks in cement, with iron hoops over the openings. I have done so over windows of five or six feet opening, and then laid the floor-joist on them; and the floor or joist-plates may also be dispensed with, by making a screed of good cement over the brick and cement-bond, so that the joist may still have a tie; and where this is not considered sufficient, an iron tie may be fixed on the ends of some of them, and built in.

It has been said that failures and accidents have been caused by building too quick, where cement has been used, which is a mistaken idea, as brick and cement may be followed as quick as it sets, which it will do in a few hours at the longest.

One word as to columns: it seems to me that the proper method of building columns is quite overlooked, viz., that of laying the bricks the same as they would be in a square pier, heading, and stretching in alternate courses (cutting the outside to the proper sweep), thereby having all solid work and proper bond. I consider the method of cutting and laying bricks flat, radiating from the centre, is very bad; but laying them on their edges, in the same way is worse.

In building columns to take a great weight, malm paviers, being a uniform hard and sound brick, should be used, not being so likely to break in cutting as stocks are; but brick made of a quadrant shape, I think, without doubt, would be better, breaking joint every course; and as very little cement would thus have to be used, I think the expense would not be more than in the ordinary way; and if made from 9 inches to 3 feet diameter, a brickmaker might, I think, sell a great many.*

Broxbourne. JAMES PULHAM.

* A correspondent from Wolverhampton (R. R.) says, on the same subject,—I am surprised to see that, in reference to the late accident at the Euston station, not one of the parties or of your correspondents have noticed the simple and efficacious method of building columns with bricks moulded for the purpose. I send you a sketch of the method I have adopted in similar cases, by which, at an outlay of 30s. for moulds, about 5s. or 10s. per thousand extra price for the bricks, and a *little foresight*, a good, firm, well-bonded column can be built, without waste of material and labour in cutting, and with half the quantity of cement. Of course, in making the moulds, allowance must be made for the shrinking of the clay in drying and burning.

FINE ARTS IN BRISTOL.—A junction has been effected between the Academy of Fine Arts recently established in Bristol and the Bristol Institution for the advancement of literature and science, which can scarcely fail to be of great advantage to both bodies, and consequently to the city. The arrangement will give the academy immediate accommodation in a fine building and the use of a gallery of casts, &c., for which the institution will receive from them 3,000*l.*, and thereby be enabled to increase the museum, and otherwise advance the interests of science.

LIGHTING BY ELECTRICITY.—Experiments are still being made (previously alluded to by us) with the view of obtaining continuous light from the electric spark. At the theatre of the Palais Royal, Paris, recently, some extraordinary effects were produced in this way.

REVIVED USE OF MEMORIAL BRASSES.

THE art of engraving monumental brasses, after having flourished nearly four hundred years, presents striking evidence of decline in specimens of the sixteenth century, and in the succeeding century it was almost wholly superseded by the monuments in stone, terra-cotta, and painted wood, which then came into general use, and which were succeeded in turn by the pseudo-classic and grotesque barbarisms, with which many of our churches and cathedrals are cruelly disfigured.

Mr. J. W. Archer has been for some time past applying himself to the revival of the art, and last week gave us the opportunity of inspecting a brass of large size, which he has recently completed, and is intended to be placed in the family chapel of the Cottons, of Landwade, in Cambridgeshire. It is in the perpendicular style, 5 ft. by 4 ft., and contains a legend in raised characters under a flat canopy, consisting of a border of strawberry leaves, a moulding composed of crosslets and fleur-de-lis, in blue and red upon a ground of dull green. This is succeeded by a series of quatrefoils in pale blue, a moulding composed of the water lily, and another of small flowers upon a ground of bright scarlet. Within the depressed arch of the canopy is a trellis of vine leaves bordering the top and sides of the legend. This is effected in high relief, shewing the veining of the leaves by an original process of his own invention. By this method the inventor thinks, not only the boldest results, but likewise the more delicate minutiæ are capable of being rendered according to the most intricate varieties of design. The lower part of the monument is composed of a base containing the monogram C. H. for Cotton and Houblon, in characters worked in low relief with the hop plant and griffins' heads erased, the arms of the intermarried families: alternately with the escutcheons containing the monograms, are compartments representing the common Gothic ornament, found likewise on the tomb of Harpagus, at Xanthus, and to whose name it is supposed to bear allusion, called the grappling iron or harpagus. The colours on the base are composed of dull red, with smaller portions of bright blue, and of dull blue and bright red in succession; in the centre of the base are the arms of Cotton and Houblon impaled.

From the circumstance that a mixed metal is not calculated to bear the application of enamel, a durable substitute as a colouring material has remained a desideratum. In consequence of the use of coloured mastic and other perishable substances, ancient brasses are found generally destitute of this means of decoration, or retaining only such traces of it as merely serve to show that it has formerly existed. In remedy of this desideratum, Mr. Archer has made it his object to obtain a substance of a more permanent nature, and conceives he has procured for the above monument material scarcely inferior to enamel in hardness. At our request Mr. Archer has given the following memorandum of his progress:—

In July, 1839, I had an opportunity of reviving the use of church brasses in a monument in memory of Dr. Davy, which I was employed to execute for the chapel of Caius College, Cambridge.

This is a small brass, including an effigy of Dr. Davy in a niche composed of the representation of one of the gates of Caius College, called the Gate of Honour. It is now inlaid in the pavement of the body of the chapel. Since that time I have produced upwards of twenty brasses, chiefly of my own design.

In producing these works I have met with assistance and encouragement from members of the Cambridge and Oxford Camden Societies, and clergymen and gentlemen of taste.

Among my larger productions in this revived art are the following, viz.—At Foulmire, in Cambridgeshire, a large cross, with four ogee points, containing in the centre the sacred monogram upon a ground of small diaper, with a legend. At Ribbersford, in Gloucestershire, an effigy, with canopy, containing a shield of arms, buttresses, &c., in memory of Captain Winnington Ingram, dedicated by the brother officers of the Enniskillen Dragoons. At Wargrave, in Berkshire, a large brass, covering a space of 9 feet inlaid in Purbeck stone, consisting of the figure of an angel with a sword lowered, on which is inscribed—"The sword of the spirit, which is the word of God;" and in the raised hand a chalice, with a label inscribed—"I am the way." Two lesser figures support a diapered drapery bearing the legend. This monument was likewise dedicated by the Enniskillen Dragoons to their officer, Colonel White, of Wargrave.

Being desirous of effectually reviving the general use of this ancient and national art, I have spared no pains in availing myself of such means as may entitle it to a place among the fine arts of the present century, and I see in it such capabilities for extension, both as regards design and workmanship, that I have little doubt of its ultimate success. In anticipating such a result, I found my hopes not only on the intrinsic beauty of which this kind of monument is susceptible, but likewise upon the remedy which it will provide against that disfigurement of churches, which has occurred through the intrusive position of mural monuments, having a bold projection.

In the case of the monumental brass, whether placed in the wall, the pavement, or upon an altar tomb, it interferes with no projection, but takes its place upon the surface, serving as a relief to the blank monotony of the interior walls of our churches, and connecting the embellishments of enriched windows, carved work, &c., with analogous forms, and colours, and types, which preserve an entire harmony with the religious character of the sacred edifice.

RAILWAY JOTTINGS.—Landslips have been rather frequent of late. About 100 yards of a deep cutting on the London and Brighton, near Hayward's-heath tunnel, fell in on Thursday week; and on the Friday following a portion of the line itself of the Caledonian, near Ecclefechan, was undermined, and a serious accident was the consequence to a train, in which about six passengers had their legs broken, and several others met with severe bruises. Mr. Goodridge, of Bath, the architect, was slightly injured. Nearly the whole of the carriages were smashed to pieces the instant the engine sunk.——On another Scottish line, the Edinburgh and Glasgow, a landslip has taken place at an embankment near the Falkirk tunnel. Three oxen were killed in consequence of some trucks being thrown off the rails.——The masons and miners at the Huddersfield tunnel, on the Manchester and Huddersfield line, have struck work in consequence of an intimated reduction of wages. There are many hundreds in all,—the miners with 5*s.* a day of eight hours previously 6*s.*), but offered 4*s.* 6*d.*, and the masons with 4*s.* 6*d.* and 5*s.* a day of ten hours, but offered 4*s.* and 4*s.* 6*d.* The sub-contractors have advertised for 500 masons and miners.——The stone blocks in the Kilsby tunnel are being replaced with wooden sleepers, the stones having been found very liable to break off at the chairs from vibration. Safety is held to demand the change.——The Great Western Company have been found liable in nearly the full amount of the doubled rate (2,000*l.*) assessed by the parish of Paddington. The reference has lasted twelve months, and the Company must pay the costs.

PROVINCIAL.—The mines beneath Dudley Castle having been decided to be quite safe, the castle has been again thrown open to inspection.——A stained window, by Wailes, has been put up in St. Mary's Church, Birmingham. The design is from Raffaelle's Transfiguration, but it is thought by the Birmingham people to be 'too dazzling.'——A monument is to be erected to the memory of the late Earl Powis, with the 5,000*l.* collected for the testimonial.——A site has been got for a new church and burial-ground at Penrith. The work will be superintended by Messrs. Travis and Magnall, architects, of Manchester; and the building will be executed by Mr. Joseph Mawson: the joiners work by Mr. Green; the slating by Mr. William Bailey; and the plastering, plumbing, and glazing by Mr. William Scott, all of Penrith.——The foundation-stone of the new patent slip at Harrington was laid on Friday last.——The Conside iron-works, Shotley-bridge, says the *Durham Chronicle*, now support a population of 20,000, on wages amounting to 4,200*l.* a week.

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